

Original Research Article

Factors Related to the Nutritional Status of Children Under Five in the Working Area of the Billa Cenge Public Health Center Southwest Sumba Regency

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Abstract: Nutritional status is the state of the body as a result of food consumption and use of nutrients. Nutrition is also one of the capitals in determining the quality of resources that can increase physical growth and the development of human intelligence. Based on the health profile of Southwest Sumba Regency in 2019, namely in June, children under five who experienced malnutrition had reached 100 cases, while cases of malnutrition were 348 cases. The Billa Cenge Health Center is one of the health centers located in North Kodi District, Southwest Sumba Regency. The Billa Cenge Health Center is one of the health centers that have nutritional status problems with a total of 50 cases. The purpose of this study was to analyze the factors related to the nutritional status of children under five in the work area of the Billa Cenge Health Center, Southwest Sumba Regency. The type of research used is a survey research with a cross sectional design. The location and time of this research is in the Work Area of the Billa Cenge Health Center, Southwest Sumba Regency, in October 2021. The sample used in this study was 97 toddlers. The data obtained were analyzed using chi-square with a significance level of $\alpha=0.05$. The results showed that there were six variables that had a relationship and one variable that did not have a relationship with the status of children under five, namely the level of knowledge of maternal nutrition (p-value= 0.001), mother's education (p-value= 0.000), maternal nutritional behavior (p-value= 0.001), family income (p-value= 0,004) and number of family members (p-value=0,006). Therefore, the communities, especially mothers who have children under five, are expected to seek information about the handling of nutritional status problems in children under five and participate in socialization activities on how to process good food ingredients for toddlers.

Keyword: Risk Factors and Nutritional Status.

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INTRODUCTION

Healthy and quality human resources Healthy and quality human resources are the main capital or investment in development. In this regard, nutrition is one of the assets in determining the quality of resources that can increase physical growth and the development of human intelligence. Nutritional status is the state of the body as a result of food consumption and use of nutrients. Nutritional status is divided into poor nutritional status, poor nutritional status, and good nutritional status and over nutritional status [1].

Nutritional problems were originally considered a health problem that could only be overcome by medical treatment [2]. It is now known that clinical signs of malnutrition are the result of an imbalance between humans and their environment. This

environment includes the natural, biological, socio-cultural and economic environment. Good nutrition will generally increase the body's resistance to infectious diseases. On the other hand, malnutrition results in a person's susceptibility to infectious diseases. Malnutrition is actually not a problem for children in Indonesia, if families adhere to good nutrition, children will grow up healthy, strong and have good nutritional status [3]. Nutrition is one of the important factors that determine the level of health and harmony between physical development and mental development [4]. The level of normal nutritional status is achieved when optimal nutritional needs are met. The nutritional status of children under five is a major problem in the health sector, especially in developing countries. The toddler group is the group of people who are most susceptible to nutritional disorders even though at this time they are

experiencing rapid brain growth. Infancy is often stated as a critical period for optimizing growth and brain development which is strongly influenced by parenting patterns, one of which is in the pattern of feeding as an entry point for fulfilling various nutritional needs, but poor feeding patterns can affect nutritional status. the toddler [5].

Based on the results of the 2018 Riskesdas, it is known that the proportion of poor nutritional status and nutritional status of children under five in Indonesia is 17.7%, consisting of 3.9% malnutrition and 13.8% malnutrition. The lowest proportion of poor nutritional status and malnutrition status in 2018 was in the Riau archipelago province of 13.0% and the highest proportion of poor nutritional status and malnutrition in 2018 was in the province of East Nusa Tenggara at 29.5% [6].

The Province of East Nusa Tenggara (NTT) is the province with the most cases of nutritional status problems by province in 2017 with 7.4% of cases of malnutrition under five and 20.9% of cases of undernourished children (East Nusa Tenggara Provincial Health Office, 2016). Based on data and Health Information on the Indonesian Health Profile in 2019, the province with the highest percentage of nutritional status problems was NTT Province with 6.90% of malnutrition problems and 17.60% of malnutrition problems [7].

Based on the health profile of Southwest Sumba Regency in 2017-2019 there were recorded cases of malnutrition and malnutrition, in 2017 there were 329 cases of malnutrition and 907 cases of malnutrition, in 2018 there were 322 cases of malnutrition and 939 cases of malnutrition. cases and in mid-2019, namely in June, under-fives experiencing malnutrition had reached 100 cases, while cases of malnutrition were 348 cases [8].

The Billa Cenge Health Center is one of the health centers located in North Kodi District, Southwest

Sumba Regency. Data from the Billa Cenge Health Center shows that the problem of the nutritional status of children under five in the last three years (2018-2020) has increased more in poor nutrition status and tends to stagnate in undernourished status. Almost every year there is a problem with the nutritional status of children under five which results in death if not treated quickly. In 2018 there were 3 cases of malnutrition and 50 cases of malnutrition, in 2019 cases of malnutrition increased by 23 cases and cases of malnutrition decreased by 9 cases, and in 2020 cases of malnutrition increased by 47 cases [9].

METHOD

The type of research used in this research is survey research with a cross sectional design, namely data collection at one time (point time approach). This survey was conducted in the working area of the Billa Cenge Health Center, Southwest Sumba Regency, from September – October 2021. The population in this study were all mothers with children under five who were in the working area of the Billa Cenge Health Center. The sampling technique used is simple random sampling technique. The variables surveyed were independent variables (mother's knowledge, mother's education, mother's occupation, family income, number of family members, maternal nutritional behavior, and traditions or habits) and dependent variable (nutritional status of children under five). Analysis of the data used in this study using Univariate and Bivariate analysis and Chi-square test. This research has received ethical approval with the number "ethical approval": 2021134-KEPK.

RESULT

1. Characteristics of Respondents

Characteristics of respondents in this research: age, mother's education, employment status, mother's knowledge, mother's attitude, mother's actions, exclusive breastfeeding and malnutrition status in children under five can be seen in Table 1.

Table 1: Frequency Distribution Based on the Characteristics of Respondents in the Work Area of the Billa Cenge Health Center, Southwest Sumba Regency

Characteristics of Respondents	(n)	(%)
Mother's Age		
<21 years old	2	2,1
21 years – 35 years	85	87,6
> 35 years old	10	10,3
Toddler Age		
0-6 months	13	13,4
7-11 months	4	4,1
12-23 months	28	28,9
24-59 months	52	53,6
Gender		
Female	51	52,6
Male	46	47,4

Table 1 shows that of the 97 respondents, the most maternal age characteristics were at the age of 21 years – 35 years, namely 85 (87.6%), for the most common age characteristics of children under five aged 24-59 months, which was 52 (53 ,6%) and the highest

number of gender characteristics was in women, namely 51 (52.6%).

2. Analysis of Relationships Between Variables

Table 2: Analysis of the Relationship Between Knowledge, Education, Maternal Nutritional Behavior, Family Income and Number of Family Members with Nutritional Status of Children Under Five in Wee Kombaka Village, Southwest Sumba Regency

Variable	Nutritional Status				Total		P- Value
	Malnutrition		Normal Nutrition		n	%	
	n	%	n	%			
Mother's Knowledge							
Not Good	61	76,2	19	23,8	80	100,0	0,001
Good	6	35,3	11	64,7	17	100,0	
Total	67	69,1	30	30,9	97	100,0	
Mother's Education							
Low	64	78,0	18	22,0	82	100,0	0,000
Tall	3	20,0	12	80,0	15	100,0	
Total	67	69,1	30	30,9	97	100,0	
Mother's Nutritional Behavior							
Not Good	64	74,4	22	25,6	86	100,0	0,003
Good	3	27,3	8	72,7	11	100,0	
Total	67	69,1	30	30,9	97	100,0	
Family Income							
Low	41	60,3	27	39,7	68	100,0	0,004
Tall	26	89,7	3	10,3	29	100,0	
Total	67	69,1	30	30,9	97	100,0	
Number of Family Members							
Small ≤ 4	10	45,5	12	54,5	22	100,0	0,006
Large > 4	57	76,0	18	24,0	75	100,0	
Total	67	69,1	30	30,9	97	100,0	

Table 2 shows that for the relationship between mother's knowledge and nutritional status of children under five with Chi-square test results found a value (p = 0.001) which means there is a relationship between mother's knowledge and nutritional status of children under five in the Work Area of the Billa Cenge Health Center, Southwest Sumba Regency. For the relationship between mother's education and nutritional status in toddlers with the results of the Chi-square test found a value (p = 0.000) which means there is a relationship between mother's education and nutritional status in toddlers. Square value found (p = 0.003) which means there is a relationship between the nutritional behavior of mothers with nutritional status in toddlers. For the relationship between family income and nutritional status in children under five with the Chi-square test results found a value (p = 0.004) which means that there is a relationship between family income status and malnutrition status in toddlers and for the relationship between the status of the number of family members and nutritional status in toddlers with the results Chi-square test found a value (p = 0.006) which means that there is a relationship between the number of family members and the nutritional status of children under five.

DISCUSSION

1. Relationship of Mother's Knowledge Level with Nutritional Status in Toddler Children

Knowledge is all information, experience that is known by someone, information becomes a basis for doing something because knowledge will enable someone to take different or more effective actions. Low knowledge of maternal nutrition can hinder efforts to improve good nutrition in the family, but good knowledge cannot always turn the community into a nutrition conscious family in the sense that they do not only know nutrition but must understand and be willing to take action to apply this knowledge in providing and serving food nutritious for all family members [10].

The results showed that the mother's level of knowledge was statistically related to the nutritional status of children under five with p-value = 0.001 (<0.05). Most of the children of the respondents who had poor knowledge levels experienced more or less nutritional status 76.2%. This is because most mothers of children under five have a low level of education and thus will have an impact on the knowledge of mothers who are lacking in providing nutritious and varied food to children under five so that they do not get experience

about how to provide balanced nutrition to toddlers which can have an impact on the status of children under five. toddler nutrition. Lack of knowledge of mothers will affect the provision of food to children under five in terms of the type, amount and frequency of feeding to children under five. On the other hand, if the mother's knowledge is good, it will affect the feeding pattern of the under-five children, because the nutritional needs and adequacy of the under-five children are very dependent on the mother's knowledge about the type of food given by the mother.

Research is in line with research that has been done [11] which states that there is a relationship between mother's knowledge and malnutrition in under-five children with p -value = 0.004. Other research that is in line with other research conducted [12] which states that there is a relationship between maternal nutritional knowledge and nutritional status in toddlers with p -value = 0.002.

2. The Relationship of Mother's Education with Nutritional Status in Toddler Children

Mother's education about nutritional status is needed to form positive behavior in terms of meeting nutritional needs as one of the important elements that support a person's health status to produce the behaviors needed to maintain, maintain or improve a good nutritional state. The results of statistical tests showed that mother's education had a significant relationship (p -value = 0.000) (<0.05). The results of the research show that respondents with lower education have more than 64 (78.0%) undernutrition status compared to respondents with higher education with a total of 3 (20.0%). This happens because low education affects the level of understanding of child care, including in terms of care, feeding and guidance for children which will have an impact on declining health and nutrition. The higher a person's education level, the younger they will be given an understanding of information and the younger they will be to implement their knowledge in behavior, especially in health and nutrition. Thus, the relatively low level of maternal education will be related to the attitudes and actions of mothers in dealing with the problem of malnutrition in children under five.

The research results are in line with the research that has been done [13] which states that there is a relationship between mother's education and nutritional status in children under five with p -value = 0.022. Other research that is in line with this research is the research conducted [16] states that there is a relationship between mother's education and nutritional status in children under five with p -value = 0.004.

3. Relationship between Mother's Nutritional Behavior and Nutritional Status in Toddler Children

After someone knows the stimulus or health object, then conduct an assessment or opinion on what

is known, the next process it is hoped that he will carry out or practice what is known or attitude (judged good), this is called health practice or behavior. Behavior change or adopting a new behavior follows the stages: these, namely through the process of changing knowledge, attitudes and practice. Behavior to fulfill food security family is a process / method / action in the form of activities or actions to fulfill access physically, economically and fulfill food availability in sufficient, safe, and nutritious amounts to meet the needs and not contrary to religion, belief, and culture of the community to live a healthy life, active and productive in a sustainable manner.

The results showed that statistically there was a relationship between behavior and nutritional status in children under five with p -value = 0.003 (<0.05). The results showed that the children of respondents whose nutritional behavior was more or less experienced poor nutritional status with a total of 64 (74.4%) compared to respondents who had good nutritional behavior with a total of 3 (27.3%). Research results that are in line with this research are research conducted [14] which states that there is a relationship between mother's behavior and nutritional status in toddlers with p -value = 0.000. Other research results that are in line with this research are research conducted [15] stated that there was a relationship between mother's behavior and the nutritional status of children under five with p -value = 0.002.

4. Relationship of Family Income with Nutritional Status in Toddler Children

Income can be interpreted as total revenue (money or not money) a person or a house ladder over a certain period. Most countries household consumption includes household expenditure to buy the necessities of life such as food, drink, clothing, vehicle, rental home, entertainment, and more. The wages earned by a person is total receipts or results given by a company for their performance. The reception obtained is given in accordance with the agreement (contract), means that the income received can be given daily, weekly or monthly.

The results of statistical tests showed that family income had a significant relationship (p -value = 0.004) (<0.05). In this research, it is shown that children of respondents with low incomes are more likely to have poor nutritional status with a total of 41 (60.3%) compared to respondents with high incomes with a total of 26 (89.7%). This is due to the low level of education possessed by mothers of children under five so they cannot get a decent job which will have an impact on the mother's income. However, there are also some respondents who were interviewed who have above average income but their children under five still have problems with poor nutritional status, this is due to the number of dependents in the family and also the number of family members who are too many, which

means that if more family members are borne, then will have an impact on the fulfillment of nutritional status in children under five.

This research is in line with the research conducted [17] which states that there is a relationship between family income and nutritional status in children under five with p-value = 0.014. Other research that is in line with this research is the research conducted by [18] which shows that there is a relationship between family income and nutritional status in children under five with p-value = 0.029.

5. The Relationship between the Number of Family Members and the Nutritional Status of Toddlers

The results of statistical tests showed that the number of family members had a significant relationship (p-value = 0.006) (<0.05). The results showed that respondents with more than 4 family members experienced poor nutritional status with a total of 57 (76.0 %) compared to respondents with <4 family members with a total of 10 (45.5%). The number of family members in the household can determine the size of the family's food needs, the more the number of family members, the more needs that must be met, including food. This, can lead to a lack of nutritional intake for children under five so that it has an impact on nutritional problems.

The results of this study are in line with research conducted [19] states that there is a relationship between the number of family members and the nutritional status of children under five with p-value = 0.000. Other research that is in line with this research is the research conducted [20] which states that there is a relationship between the number of family members and the nutritional status of children under five with p-value = 0.000. The results of research that contradict this research are research conducted [21] with p-value = 0.178.

CONCLUSION

Based on the research results, it can be concluded that from the 7 research variables there are 6 variables that have a significant relationship, namely maternal knowledge, mother's education, maternal nutritional behavior, family income and number of family members with nutritional status of children under five in the Work Area of the Billa Cenge Health Center, Sumba Regency. Southwest.

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